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CASE
OF
LACERATED WOUND OF THE ELBOW-JOINT,
TREATED SUCCESSFULLY BY THE ANTISEPTIC METHOD OF
PROFESSOR LISTER.

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So far as may be judged from the publication of reports of cases, both public and private, it may be safely asserted that the antiseptic method of treating wounds, either simple or complicated, has not been largely employed in this country. Whether the failure to carry this plan into practice has arisen from any pre-conceived prejudices, or from a want of appreciation of what may be esteemed its merits, it is difficult to say. It can scarcely be attributed to difficulties presented in obtaining the proper appliances, or in securing their proper application. There appears to be no evidence on record showing that, at the time of its introduction into our public and private practice, the failures to accomplish successful results were so numerous as to create a prejudice against its use. It occurs to me to suggest that, in many cases, too much had been expected of this plan; without doubt,

it was often applied improperly, and under such conditions as necessarily involved failure. In the early accounts given of this method, its distinguished author distinctly stated that a perfect result could not always be expected. More or less suppuration may occur in wounds under the antiseptic application, and should not deter the surgeon from persevering in his treatment. In the management of the case which I bring before the College on this occasion, I followed the instructions given above, and to this fact is due very largely, if not entirely, the successful result obtained.

The patient, M. H., æt. 22, was admitted into the Surgical Wards of St. Mary's Hospital on July 6, with a punctured and lacerated wound of the left elbow-joint, caused by being stepped upon by a mule, the long, pointed heels of the shoe penetrating the cavity of the joint. On examination, some hours after the receipt of the injury, there were found two wounds, one on the outer aspect of the arm, just above the condyle, extending in depth to the bone, but not communicating with the articulation, and the other, on the anterior surface of the joint, quite near to the inner border. This wound opened directly into the joint, the ligament being ruptured to a large extent, and thus exposing the articular surfaces of the bones which were partially denuded of cartilage.

Although the patient had been run over at the time of the receipt of the injury to the joint, the wheels of an empty ice-wagon passing over his chest and right arm, still he was remarkably free from any symptoms of shock. After consultation with my colleagues, it was determined that an effort should be made to save the limb, and, in order to accomplish this end, I decided to employ the antiseptic method. Delay occurred in procuring a portion of the dressing I wished to apply, and the treatment was therefore not begun

until nearly forty-eight hours after the accident, when some inflammatory action had taken place, the joint being much swollen and the skin discolored. A thin, sanious fluid, a mixture of blood and synovia, issued from the joint wound, but suppuration had not commenced.

The method of applying the antiseptic dressings was, in the main, that first suggested by Prof. Lister, as reported in Ashhurst's *Principles and Practice of Surgery*, p. 149, and consisted in covering the joint completely with a compress of sheet lint, of such size as to extend from the middle of the arm to the middle of the forearm, the compress being first saturated with a mixture of carbolic acid (Calvert's solution), one part, to olive oil, four parts. This compress was made thoroughly antiseptic, every portion being soaked in the carbolic acid mixture. A putty, made of carbonate of lime and the carbolic acid mixture, was then spread upon a strong muslin compress, and applied over the first compress, in such manner as to completely envelop the part. A piece of waxed paper was placed over this, and the whole dressing retained in place by a bandage loosely applied. In order to maintain motion in the joint, a Stromeyer's splint was secured to the part, and instructions were given to the resident physician, Dr. Ragan, to change daily the position of the arm by acting upon the joint of the splint.

The patient complained for a short time of slight burning pain, caused by the carbolic acid mixture where it came in contact with the surfaces of the wound. In other respects, he expressed himself as free from pain and discomfort. His condition was very favorable after the application of the dressing, the symptoms of inflammatory action gradually disappearing.

Four days after the dressings were applied, the inner compress of sheet lint was exposed, and on the under surface, near the joint wound, were found evidences of slight suppuration. This compress was not disturbed, but a quantity of the carbolic acid mixture (acid and oil) was poured upon the external surface and rubbed into the meshes of the lint, so as

to saturate it, when a fresh compress covered by the putty was applied with the waxed paper and splint as before. Four days later, the outer dressings were again removed, and it was evident that the suppurative action had increased since the last dressing, there being sufficient pus to saturate the under surface of the lint compress. There was, however, but slight odor. The compress was allowed to remain in place, and again rubbed over with the acid and oil, the outer dressings being replaced as before described, with a change of the putty compress.

In this manner the wound was dressed until the seventeenth day, when *all* of the dressings were removed, and the following conditions were observed: The sheet-lint compress was slightly offensive, the portion in contact with the joint wound being covered with pus which had become dry. Both wounds were entirely filled up, and cicatrization was beginning in each. The motion of the joint was very free, extension being slightly limited; in the forearm, supination and pronation could be accomplished with slight difficulty. The dressings were renewed, with the exception of the compress of putty, and at the expiration of two weeks they were removed finally, the wounds being healed and motion completely established.

The patient received his discharge from the Hospital, and has been able to use his arm in his work; strength and motion were rapidly regained in the joint, and, save the cicatrices which are seen, there is nothing to indicate the grave character of the injury received. There appears to be no impairment of any of the movements belonging to the joint or forearm.

In this case, it will be observed that the antiseptic method was not strictly carried out, owing to the omission to apply to the wounds and wounded surfaces, the strong acid prior to the application of the dressing, as recommended by Prof. Lister. Without

any extended experience in the use of the plan, I hesitated to apply to the interior of the joint the acid in such form; the acid and oil mixture was applied to the wounded surfaces, but not in the manner or quantity recommended.

It is also to be observed that motion of the joint was faithfully practised by means of the splint. The patient was sufficiently intelligent to recognize the great importance of this duty, and contributed without doubt to the successful result by giving attention to this himself. Notwithstanding this combination of treatment, I am still inclined to claim the result as, in a large measure, due to the antiseptic plan. While suppuration occurred, I believe it was limited in extent and duration by the dressing employed. I question whether this result would have been obtained under any other mode of treatment.